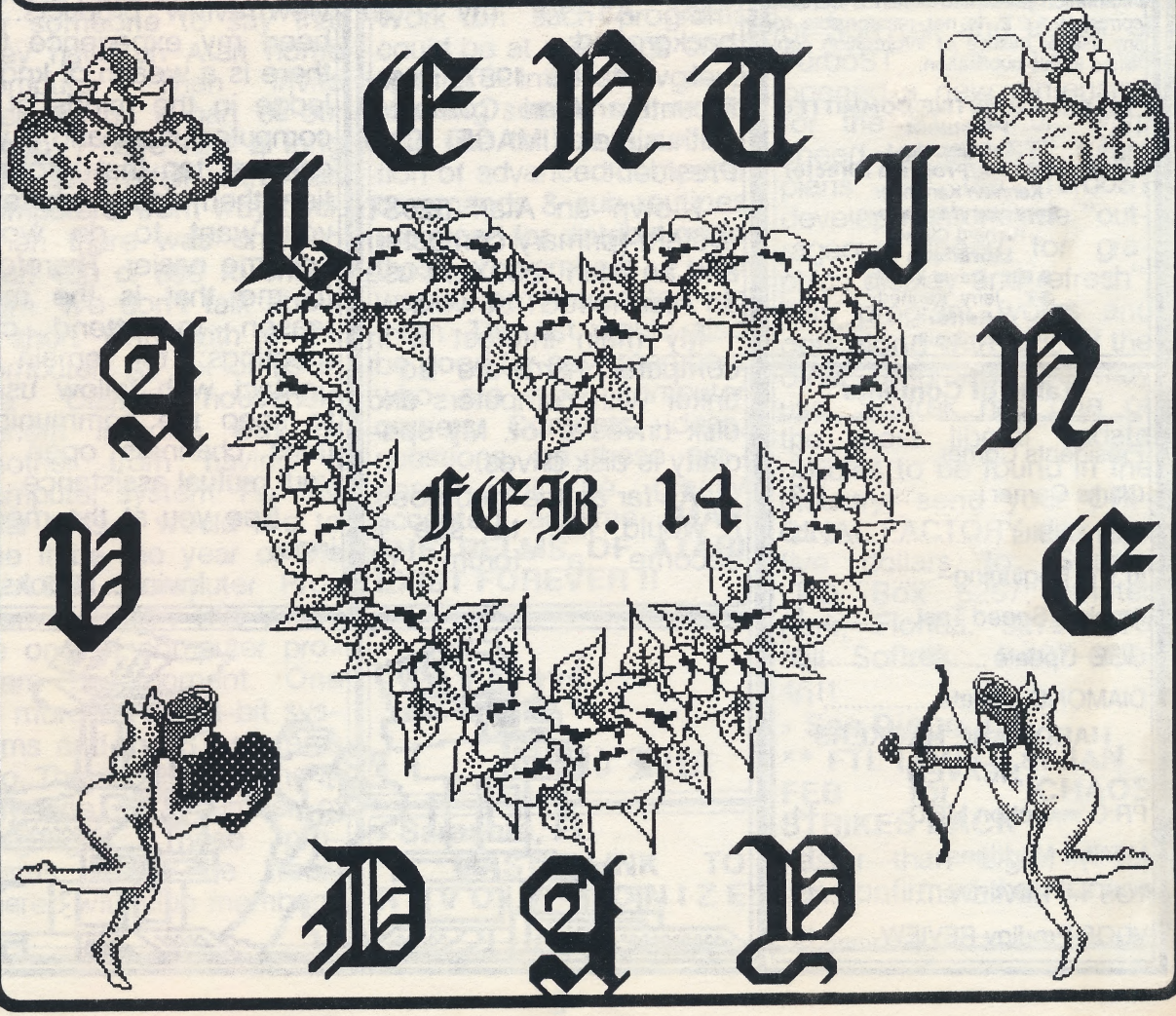
Vol. 7 No. 2 Feb.1989

Layton Atari Computer Enthusiasts

L.A.C.E.

400 800 600XL 800XL 1200XL 65XE 130XE 520ST 1040ST MEGA 2 MEGA 4 XEGS

L.A.C.E. The monthly publication for the Atari Computer owner. Designed to assist the Atari user in the use and enjoyment of their ATARI computers and accessories.



Vol. 6 Feb. 1989

LACE

The L.A.C.E. Newsletter is publlished monthly by The Layton Atari Computer Enthusiasts Club for the sole purpose of bringing the latest possible Atari information to it's members. Subscriptions to this Newsletter may be obtains by becoming a member in the club. Club membership is $20.00/year. The club membership dues cover the publishing and mailing of this newsletter only.

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Presidents Corner

––by––
––Irwin Brooks––

I would like to take a short bit of space here to interduce myself. My name is Irwin Brooks and I have been elected as your LACE Club President for 1989. As for my Atari background:

–I was the 1987 Inter–Mountain Atari Computer Enthusiates (IMACE) Club President

–I own an Atari 520ST system (primary computer) and an Atari 1200XL. I use an Atari 1040ST at work.

–My main interest is in computer hardware so I tinker with computers and disk drives a lot. My specialty is disk drives.

As far as the club goes; I would like to see it become a forum of friendly users that meet monthly with the sole intent to discuss current happenings, hardware/software problems, exchange knowledge and view/review products. Its been my experience that there is a wealth of knowledge in the minds of all computer users and if you can just tap that information then doing whatever you want to do would become easier. Therefore, to me that is the main reason to attend club meetings: to remain in contact with fellow users to keep the communications channels open for your mutual assistance.

See you at the meetings,

Irwin L. Brooks

Clark's Computer Corner

Hello, My name is Richard D. Clarke Jr. This is my third year as a member of L.A.C.E. I was introduced to the club by another member. We should always have our ears open for someone to say that they have an Atari home computer. Then invite them to be a part of our group. I have had a long term love affair with Atari computers, from way back when there was only an Atari 400 or 800 to chose from. We don't talk about a short fling with a T.I. computer. All six of us in the Clarke household benefit in one way or another from having a computer system. For the year 1989, I would like to see it be the year of the "L.A.C.E. Computer Program Project". This would be one of computer program development. One or more for the 8-bit systems and the ST systems too. They could be done in any one of a number of languages. These programs would be freely shared with club members. An attempt should be made to market these programs for a fee (club income). Programs could be games, graphics, application software, or what ever the members vote on. Work on such programs could be at meetings or at special interest group meeting sessions. I would also like to see a collection of advanced computer commands & sub routines produced for distribution to those members who would be interested in them. This list would also be good for new members who are new computer owners. Coments, ideas, questions, on these proposals will be greatly accepted anytime. **MAY THE RELMS OF ATARI EXIST FOREVER !!**

Atari Tid Bits

> Sarasota, FL

**** MASTERLINK TO REVOLUTIONIZE MODEMING ****

INTERSECT Software, An independant software publisher, is about to release one of the finest software packages for the telecommunications enthusiasts ever created...look for it soon...(within 90days)

> Winter Park, FL

**** TURBO ST – "BETTER THAN BLITTER SPEED" ****

Wayne Buckholdt, owner of SoftTrek and author of TurboST Ver 1.4 has opened a new dimension for the ST owner.."warp speed for the ST" future plans for the TurboST development include "outrageous speed for graphics display and refresh". This program works and gets along with 99% of the other programs you may use. Softrek has one of the most liberal update policies to be found in the industry, send your ORIGINAL FACTORY disk and five dollars to: Softrek ..PO Box 5257, Winter Park, Florida, 32793. To call Softrek.. 1-407-657-4611

> San Diego, CA

**** FTL LOOKS at JAN – FEB for "CHAOS STRIKES BACK" ****

Faster than Light, (FTL) has confirmed that "Chaos

Strikes Back" will appear between the end of Jan and the end of Feb '89 .. partly due to a lack of packaging and an intense effort to get the 'gs' version of DM out the door.

> **Sunnyvale, CA**

**** UPGRADE ROUTE for MEGA2 a DEADEND? ****

There are some MEGA ST2's that lack the "wave soldered" holes for the extra memory. This was first noticed quite recently. It appears at first glance to be that Atari wants two different styles of motherboards in use. However, this is not an accurate evaluation, consider all the factory upgrades since 1987 to the 1040ST mother board...sounds more like a 'production cost' cutting measure to us.

> **Skokie, IL**

**** USR WANTS $799.00 PLUS YOUR HST to UPGRADE! ****

US Robotics Corp. through it's representatives, Susan Pompa and Mike Levi, told this reporter that the upgrade route for owners of HST 9600 baud modems to V.32 is EXPENSIVE as a result of the high cost of half duplex canceling technology and Sysops would be best advised to wait. As it is expected to see the 'other' modem company make the existing gear compatible with the "now in the field gear". HST is expected to become the Industry Standard. (time will tell)

> **New York City, NY**

**** EUROPEAN MARKET PENETRATION APPLAUDED ****

The Atari ST is a top-selling computer in West Germany, and is consistantly in the top three in England, France and the Scandanavian countries. In all of those places, the ST is viewed as a professional system; it enjoys widespread use in businesses and universities. In fact, the number of ST computers sold in West Germany (400,000+) pales the USA market significantly. Atari is now, however, making a concentrated effort at seriously penetrating the USA market. (Radio-Electronics 2/89)

> **Sunnyvale, CA**

****** DEVELOPER CONFERENCE CANCELLED! ******

Rumor has it that the Developer Conference of Atari Corp. has been cancelled until further notice. Further, it seems, certain folks at Atari feel they must attend a competitor's (MAC) show in the same time frame and elected to drop the Atari conference.

> **Sunnyvale, CA**

**** ATARI PLANS TO SELL FEDERATED ****

Again, rumor has it that Atari may be considering selling Federated Stores. Since it's aquisition, Federated has been a thorn in Atari's and it's dealers rumps. It's departure would be construed as a very welcome sign.

In the Beginning it Was Good

800 OWNERS COLUMN

(Editors Note:)

There are a few articles in our archives that we haven't printed because they address the 400-800 Atari systems. Of the 134 survey responses received to date, 50 or more respondents stated they still owned or used thier 800.

In an effort to keep this percentage of our readers interested, we will publish material written for or about the 800. The following article was released in 1983 on CompuServe. (This is the place I found it a few years ago and recently came across it again.)

CARTRIDGE SWITCHES by HOWARD SIEBENROCK

As you know, when you plug a ROM cartridge into the left slot of your Atari 800 computer, you disable the top 8K of RAM. This is done by disabling one input of an OR gate (Z102B) that normally passes the address lines A15 and A14, decoded by chip Z101 to be S5, to the RAM slots. The S5 signal is wired to the left cartridge slot, pin 12, to enable the ROM chips in the cartridge. Pin 14 of the cartridge is connected inside to the +5 volt line. When the cartridge is inserted into the left slot this +5 volts is then connected to the Z102B OR gate to disable the S5 signal to the RAM slots. The S5 signal is the address for 40K to 48K of RAM.

The right cartridge does the same thing, except it used A15 and A13, decoded by Z101 as S4, for it's enable line. Pin 14, the +5 volt signal, of the right cartridge, disables S4 to the RAM slots with OR gate Z102A. The S4 signal is the address for 32K to 40K of the RAM.

If, while the cartridge is inserted, the +5 volt signal to the OR gate could be opened, The RAM would then be enabled. If the S5 line to the left cartridge is also opened, the cartridge chips data output would be tri-stated. (tri-stated is a third binary output state for digital chips. It is a high impedance state that electronically disconects the chip from the data buss).

Since the address lines, A0 to A12, are inputs, they can be left on the buss. By using a switch, mounted on the case, the programer can select if RAM or the cartridge ROM is on the data buss. A second switch will do the same for the right cartridge ROM.

If the S5 enable line, normally going to the left slot, is switched to the right slot, the right cartridge will be addressed as a left cartridge. You also have to switch the +5 volt signal from the right cartridge to the Z102B gate to turn off the 40K to 48K RAM.

I must warn you. If your computer is under warranty, don't modify it!

The parts needed are two minature toggle switches. Both are double pole, double throw, one is a two posistion (on-on), and the other is a three posistion (on-off-on) switch. A two foot length of eignt conductor ribbon cable (Unless you planed ahead and put in a ten conductor ribbon cable with the reset modification last time) and 10-12 inch lengths of small

insulated wire.

Once you have the parts and tools, proceed to disemble the computer to the mother board. Don't forget the CMOS handling caution!

_____ 1. Drill a hole near the center of the board for two small wires to pass through from the top to the bottom of the board. Be careful not to drill near or through any circuit runs. Hold the mother board up to a strong light to be able to see the runs on the bottom of the board and mark the location with a felt pen.

_____ 2. Cut the five runs by making two cuts across the run about 1/16 inch apart, then heat the 1/16 piece with a soldering iron until it lifts off the board.

1) From R109 to left cartridge pin 14. 2) From feed through to left cartridge pin 12. 3) From Z102 pin 4 to left cartridge pin A. 4) From Z102 pin 5 to feed through. 5) From Z101 pin 5 to feed through.

_____ 3. Run an insulated jumper from Z102 pin 5 to Z101 pin 5. Scrape the solder mask from the run just above where you made the cuts and solder the jumper to the run. Be careful with the soldering iron, remember how easy it was to remove the 1/16 inch cut out piece? Check your work carefully as you go to be sure the wires are soldered good and there are no solder bridges between runs.

_____ 4. Mount the connector in the lower right courner of the mother board, if you did not do so last time.

_____ 5. Run eight wires (I used small, solid, insulated telephone wire) from the cut circuit runs to the connector as follows.

1) From R108 on the top through the hole to connector pin 5 on the bottom. 2) From Z101 pin 5 on the top through the hole to connector pin 6. 3) From left cartridge connector pin 1 to connector pin 7. 4) From left cartridge connector pin A to connector pin 8. 5) From left cartridge connector pin 12 to connector pin 3. 6) From left cartridge connector pin 14 to connector pin 4. 7) From R109 solder pad to connector pin 1. 8) From Z102 pin 2 (at the feed through) to pin 2.

_____ 6. Drill two holes and mount the cartridge select switches on the left of the case top. Be sure the center off switch is to the left when viewed from the top.

_____ 7. The eight wires from the connector plug will now be connected. Above each wire write in the color of the wire you have coming from the connector plug.

_____ 8. Solder the two jumpers from the right switch to the left switch. I used heat shrink tubing on all switch connections to be sure there are no stray wires to cause shorts. Connect the eight wires from the connector plug to the cartridge select switches. Then trace each wire to be sure they are connected properly!

_____ 9. Now is the time to check all of your work carefully to be sure there are no shorts or solder bridges or frayed wires any where, and that all connections are proper!

_____10. Reassemble your computer and cable it to your system. Install the BASIC cartridge in the left slot and set both switches ON (up). Leave the disk drive off and power up. You should see the familiar READY prompt on the screen. If you don't then check that both switches are ON (up). If they are, then you have a mistake in your wiring. You will have to disemble the computer and check the wiring again. Be sure to check which pin you used as #1 on the new connector.

If at first you got the READY prompt then flip the left switch to the OFF (center) position and do a COLD reset. You should now have the memo pad title. Flip the left switch down (RIGHT cartridge position) and do a COLD reset. You should still have the memo pad title.

Flip both switches ON (up), and do a COLD reset. You should have the BASIC ready prompt. In direct mode exicute the following command. ? FRE(0). The number you see printed is the amount of free RAM you have. Make a note of this number then install another cartridge in the RIGHT slot. With both switches ON (up) you should get the BASIC ready prompt. Execute the ? FRE(0) command again and compare the number printed on the screen with the number you got before. It should be 8192 less. This is because the cartridge in the right slot deselected 8K of RAM. Flip the RIGHT switch OFF and do a COLD reset then exicute the command ? FRE(0) again. You should get the original number on the screen, because the right cartridge has been electronicly removed from the buss. Flip the LEFT switch OFF (center position) and do a COLD reset. You should now have the Memo pad title. Flip the LEFT switch to RIGHT (all the way down) and do a COLD reset and you should see a screen appropriate to the cartridge you have in the RIGHT slot.

Flip the LEFT switch ON and the RIGHT switch OFF and turn on the disk drive. When the busy light goes out insert a diskette with DOS on it and do a COLD reset. The screen should have the BASIC READY prompt, or what ever is appropriate for the software on your diskette. Flip the LEFT switch OFF (center posistion) and do a COLD reset. The disk should reboot and come up with the DOS menu.

I could go on with many different uses for the CARTRIDGE SWITCHES and the COLD RESET SWITCH, but I think you get the idea. One last idea. If you have a cartridge to disk copier, you can forget jamming the cover switch and inserting the cartridge to be copied in the right slot with the power on. Just insert the cartridge in the right slot and flip the RIGHT cartridge switch OFF and close the cover. When the software instructs you to insert the cartridge, just flip the RIGHT switch ON.

I hope you have enjoyed these articles, even if you don't attempt to do them. If you have any comments or suggestions, fell free to write to me.

HOWARD SIEBENROCK
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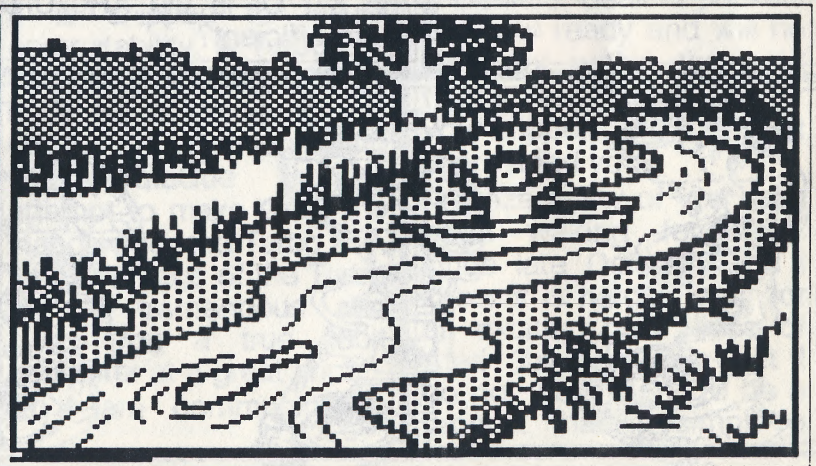
80020



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ARC SPEED TEST XT
VS
130XE

****

Well, Atari users, cheer up. I have run a preliminary speed test between ARC version 5.12 for the IBM and ARC version 2.0 (UNARC version 2.3) for the Atari.

Hardware:

1. IBM XT DOS 3.3 -Turbo card installed -internal hard disk -3.5 in. 720K floppy
2. Atari 130XE 576K SpartaDOS 3.2 -512K RAM DISK -2 INDUS GT disk drives

The IBM was used in and out of turbo mode. The test was run on the GOE.ARC file downloaded from GENIE.

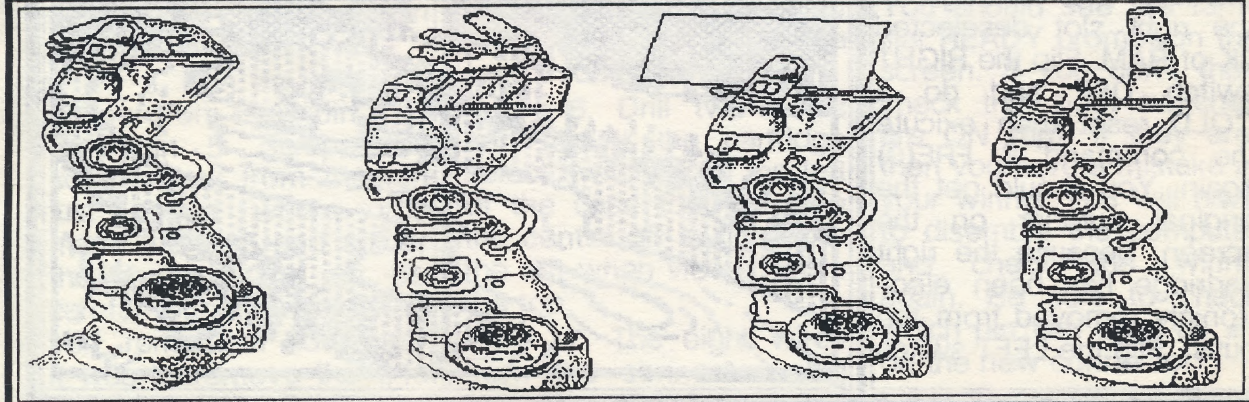
Here are the results:

	ARC		UNARC	
	IBM Hard Disk	IBM Floppy	IBM Hard Disk	IBM Floppy
Turbo In	76	133	39	68
Turbo Out	163	212	78	101
	Atari Ram Disk	Atari Floppy	Atari Ram Disk	Atari Floppy
	58	301	26	232

As you can see the Atari with the Ram Disk was faster by 23.7% running ARC, and 33.3% faster running UNARC compared to the IBM in turbo mode (64.4% and 66.6% IBM out of turbo).

But the IBM beat the Atari running on the floppy disk. The IBM in turbo mode was faster by 55.8% running ARC, and 70.7% running UNRC (29.6% and 56.5% IBM out of turbo mode).

It would be interesting to see the results of this test with the Atari running under SpartDOS X and high speed disk access. So what does this test tell us? We all know about the slow disk drive access of the Atari. If drive access speeds were equal on both computers, it looks like the 8 bit Atari would be a very tough competitor of the XT. Or is the ARC/UNARC program for the Atari more efficient?



GOE UPDATE

############

GOE/TCS UPDATE

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Total Control Systems, David R. Sullivan

You probably first heard of **GOE** back in August/September of 1988, at that time **GOE** was shown at the 1988 AtariFest in Glendale, CA. A DEMO Disk followed in October on GEnie and in user groups. Now, January 1989, **GOE** is about to be released. **GOE** has been tested over the last 3 to 4 weeks to insure that it is a bug-free and usable product, it is my hope that **GOE** will become the new standard OS for the Atari 8 bit computers.

STATUS OF GOE:

A) We are currently running behind our released schedule, this is DUE to difficulty and time needed to completely develop a cartridge based product that provides a new and exciting operating environment while at the same time maintaining 100% compatability with ALL existing software. Added to the level of programming required, **GOE** was originally being developed in a situation that required over 15 minutes to test a single change in **GOE** -- that has been corrected (curtesy of Atari, CORP. and ICD's extensive help).

B) **GOE** is in it's final debugging stages, and provided that it receives a clean bill of health GOE will be shipped the first week of February.

C) Several beta testers have been using **GOE** for 2 weeks now, all press and other qualified people will receive beta cartridges 1 week ahead of shipping.

D) The Turbo 816 and **GOE, GOE** will be tested with the Turbo 816 before it is shipped to insure compatability. A Turbo 816 version is planned, this will be a full 16 bit version of **GOE**. I am communicating with DataQue in an attempt to make **GOE** the standard for the Turbo 816, the advantage of the Turbo 816 is tremendous and gives you a true 16bit computer at a great price!

E) I am communicating with Atari, CORP. keeping an open ear to their ideas. With Atari selling thousands of 800xl, 130xe and XEGS computers the Atari 8bit future looks bright. Not to mention the support Atari, CORP. is giving in the entertainment area.

F) Advance order's, if you have placed an advance order, it will be filled with top priority. As a BONUS, all people ordering in advance will receive a free BONUS Disk containing some exciting new software.

G) Price: The retail price of **GOE** is $79.95, all discounts for advance orders are now void. User Group discounts are available.

H) If you have requested information, you will receive a mailer the first week of February notifying you that **GOE** is shipping and providing more information about **GOE**.

I) Dealers, dealers packets are now ready and will be sent out within the next two weeks. Thank you for your support, the Atari 8bit users need you.

I realize many of you have been waiting for **GOE** since late October, and I know it is hard to wait for an exciting new piece of Atari 8bit software; but I do not want **GOE** to be a product that is simply a

toy. If **GOE** and the Atari 8bit are going to have a successful future together then **GOE** MUST BE A PROGRAM THAT YOU WILL USE. **GOE** will not be shipped until it is complete and fulfills your needs. Allowing press to be released about **GOE** as early as May, 1988 was not under my control nor my intent. The official press released in September/October 1988 was a little early but has been useful and has shown the public what **GOE** is via the DEMO released on GEnie. Once the information was about, I had to make the best of it and did not count on some of the misleading information I have been delt, or some of the legal problems that I would encounter.

Stay tuned to the GEnie network for more information, GEnie is my link to you so let your thoughts be known.

goPaint and **goWrite** DEMO versions will be released shortly after **GOE** starts shipping, but have been put on hold until then. Upon shipment, Total Control Systems will start supporting you with easy and clear example programs, useful public domain programs and powerful commercial programs. A download area here on GEnie will be your source for **GOE** public domain software. A new private area will be setup for **GOE** users and **GOE** developers where you can ask your questions. The current public area, CATegory 5, TOPic 24 will be used to convey public information and answer questions to the general public.

Total Control Systems is working hard to make your Atari 8bit future a bright one, and we look forward to your support of our quality products.

GEnie ID: D.SULLIVAN4 (David R. Sullivan) **GOE** Area: Atari8, CAT 5, TOP 24

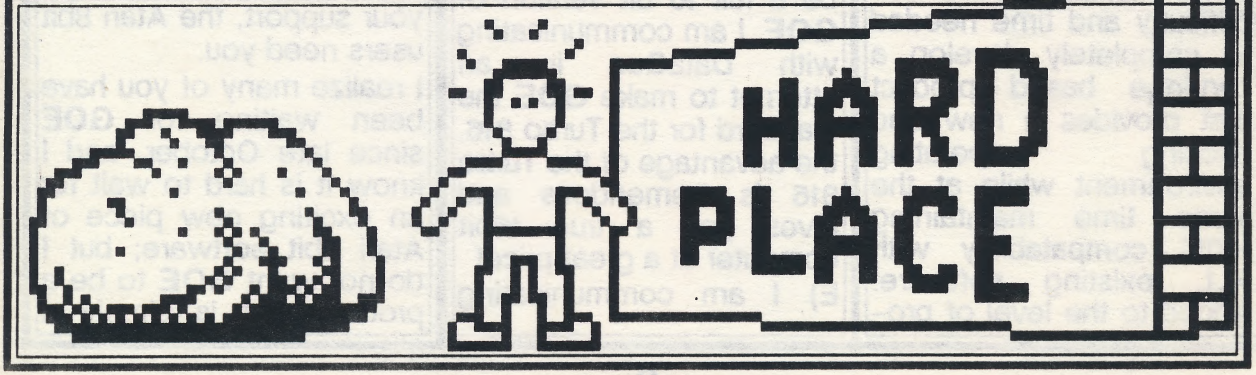
For information about access on OTHER services; information about **GOE**; or information about other TCS products please contact us at:

Total Control Systems
4156 Tolowa Street
San Diego, CA
92117
(619)270-0111

Total Control Systems also supports Atari 8bit and Atari ST and Amiga users with:

ST TC BBSst, a complete ST BBS written in GFA BASIC. AMIGA includes source code. Comming soon on Amiga. $40 GFA BASIC Programmers Toolkit.

8BIT Action! Programmers Toolkit, #1. Includes two $15 arcade game examples, a 1020 picture dumper (color) program, and much more...



DIAMOND UPDATE

############
DIAMOND from REEVE
############

by Kenneth J. Leap

Diamond OS is the new offering from REEVE Software. Alan Reeve's previous big hit for the Atari 8-bit was The News Station, a page-design program similar to (and more useful than) Springboard Software's Newsroom. **Diamond** OS is a disk operating system designed to look and work like the Atari-ST GEM graphic interface.

It does look like GEM. The drive icons look like little file cabinets that are animated so the little drawer pops open when you access a drive. There is a garbage can. There is a mouse cursor that can be controlled by joystick, an ST mouse, a touch-tablet, a trackball, and even the arrow keys on the keyboard. With your cursor you can click and double-click on drop-down menus, windows, icons, and dialog boxes.

Diamond claims to be capable of handling fonts ranging from one to twenty -four points in size and with eight different type styles per font. Supposedly can load up to six desk accessories at boot-up and address up to sixteen megabytes of memory.

The **Diamond** OS disk comes with no fonts. No desk accessories are included. If you do put a file with the .ACC extender on your disk, it does not appear under the Desk drop-down menu where the documentation says it might be found. **Diamond** accesses extra memory with special memory drivers, MEMORY.DRV. But you don't get one with it and the built-in default driver is only 14K. This means that the copy buffer is so small that it took three passes to copy a thirty-seven sector files from one drive to another. The manual does mention that if you buy the **Diamond** program disk, you can custom design your own memory drivers.

Now you know what you don't get, here's what you do get. On the disk are the following files; DOS.SYS (DOS 2.0!!!), AUTORUN.SYS (**Diamond** DUP.SYS), DESKTOP.APP (the desktop program itself), DEMWRITE.APP, DEMPAINT.APP, KOALA.DRV, MOUSE.DRV, and TOUCHTAB.DRV. MOUSE.DRV is the joystick driver. To use another device, simply rename it to MOUSE.DRV. The built-in driver is for the ST-mouse. DEMWRITE.APP is a nonfucntional demo of **Diamond** Write, REEVE's new, 80-col word processor. Some of the options shown look interesting. In the Edit menu you find; Cut, Copy, Paste, Search, Replace and Spelling. Under Mode; Page Layout, Graphics, Spacing, Justification, and Ruler are listed. DEMPAINT.APP is a similar demo of **Diamond** Paint which reveals nothing at all about the program. However, a saved picture file is sixty-two sectors so we might assume that it works with the standard Micro-painter format.

You are probably wondering why the heck DOS 2.0 is on the disk. Two quotes from the (very slender) manual. "**Diamond** DeskTop is basically a replace-

ment for the DUP.SYS file on an Atari 2.0 disk." "Please note that this disk version of **Diamond** uses Atari DOS 2.0 only due to memory conflicts with other DOS environments." Well it also works with 2.5 but nothing else. I tried and it doesn't. This means the even though when you pull down the Disk menu and click on Format and the dialog box asks you if you want single or double density; single is all you get. With 2.5, it does format in enhanced density.

This is a major flaw. It means that with **Diamond** you can forget about using your US Doubler, Indus or your brand new XF551 drive to its full potential. You can install up to seven drives in **Diamond** but there is no mention of hard-disk support and even if you have RAMDISK.COM on a 2.5 **Diamond** disk, you can't install a RAMdisk. What you probably need is a RAMdisk desk accessory.

While we're talking about drives and flaws... I have two 1050's on my system (one with a US Doubler) so I installed Drive B on my Desktop. When I'd double click on a drive icon (or single click, drop down the File menu and click on Open), I'd get a directory window. If you double click on a binary file (or single click, go to menu and click on Open), it loads and runs. If you want to copy a file with one drive, you click on the file to hi-light it, drop down the File menu, click on Duplicate, then just follow the prompts for switching disks. You can also copy an entire disk by selecting Duplicate from the Disk menu. A dialog box asks for source and destination drives and if you want the destination formated. All of these functions work fine, though slowly because of the 14K memory driver (especially the single drive duplicate). You discover the flaw when you try to copy a file from one drive to another.The manual tells you to, "Drag file to another disk icon." So you double-click on a drive icon and get a directory window. Then you click and drag your filename to the other drive icon. A dialog box asks you (if you have the confirm feature active) if you're sure. Tell it yes and your file will be copied. This all works fine if you are copying from Drive B to Drive A. If you attempt to copy a file from Drive A to Drive B, **Diamond** will simply write the file over-top of itself on Drive A. The only way **Diamond** will copy from A to B is by duplicating a whole disk. This is a major bug that might be expected in a Beta test version but can not be tolerated in a commercial release.

While I'm on the bad stuff, here's a few more items. In the middle of disk IO, for no apparent reason, **Diamond** will pause for 20-30 seconds and then suddenly remember what it was doing and finish up. This is a totally random occurrence. You can quit from the desktop to BASIC (run cartridge) and if you quit from .APP programs, you return to the desktop. You cannot return from BASIC to the desktop with the DOS command. You might think this is because the **Diamond** utility package is named AUTORUN.SYS instead of DUP.SYS. Wrong! If you rename AUTORUN.SYS to DUP.SYS and then use the BASIC DOS command; it does try to load but you end up with garbage on the screen and a locked keyboard. The only sure way to return to the desktop from BASIC is to reboot the system.

You can drag you icons all over the screen and the use the Save Desktop

option from the Options menu. You can also drag the directory window around but its default location (center of the screen) cannot be changed. The only place you can put the icons where you can use them (not covered by the directory window when it pops up) is the left or right edge of the screen. You can expand the size of the window but the sliders are not functional. You have to repeatedly double click on the arrows to move your directory listing up or down.

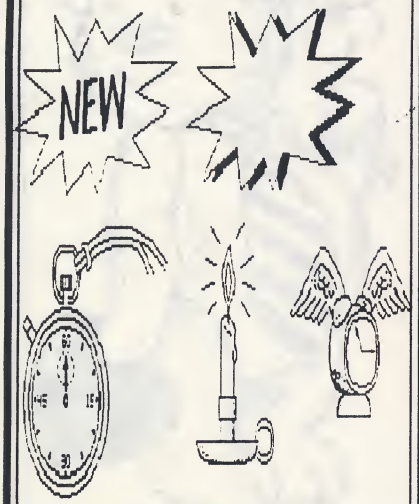
You can grab a file and drag it to the garbage can to delete it. You cannot grab a bunch of files and dump them in the can. You can also only copy, lock or rename one file at a time. There is no printer support at all from the desktop. I guess that would be another one of them desk .ACC things. One final complaint, no time-date stamping. I guess I can still put off buying ICD's R-Time cartridge.Let's sum this all up. **Diamond OS** does look nice. It is a graphic operating system for the Atari 8-bit computers (but so was the GOS demo that Total Control Systems released into the public domain two years and everything on it worked). It is not an efficient operating system. It is slow and many of its functions take a lot of clicking and mouse moving as opposed to the few keystrokes needed for more conventional DOS'es. It lacks what many consider vital features; such as double density support. I will not be found re-doing all my disks and putting **Diamond** OS on them. I have not yet tried to load a great deal of software from the desktop but I have suspicions that a lot will not be compatible.

On the other hand. It is a start, a step in the right direction. The manual promises upgrades at a reasonable price for registered owners (got to send that warranty card in). There should be a FREE upgrade to everyone who has version with copy A to B bug. I am still interested in the other **Diamond** programs. **Diamond Write** is supposed to be an 80 column word processor with built in spell-checker. **Diamond Paint** is alleged to be capable of importing Degas and MacPaint picture files. And **Diamond Publish** may even be close to a real Desktop Publishing program. The price is certainly nice. Only $29.95 each. I purchased **Diamond OS** from Software Discounters of America (Go SDA on Compuserve) for only $19.00. If they decide to carry the whole line, you could save a total of $40 by buying from them.

With improvements, quality programs that use its environment and public domain support (need those desk .ACC's) this **Diamond** in the rough might yet be cut and polished into a real GEMstone. Of course there's that STjr cartridge based system from Total Control Systems to keep in mind. It does support time date-stamping from what I've seen. Hmmmm?

Hardware

Hackers Heaven



PR:C MODIFICATION

by WK Whitton

Just as ICD has continued to support the Atari 8 bit computer, so shall LACE! And speaking of ICD, how would you like to be able to modify your PR: Connection? "For what possible reason? you ask. Well, it seems that there is a problem with using Atariwriter Plus and the PR: Connection (although of the several Atariwriter+/ PR: Connection owners I interviewed, none experienced this problem). When you reload the spellchecker, the RS232 handler is also reloaded. Now the old 850 interface doesn't allow this, you load it one time (remember that horrid, whiny "Booooooooooop!), and therefore there is no hassle. But being of advanced design, the PR: Connection will allow reloading of the handler. So.....as you back in and out of the spellchecker, the RS232 handler keeps reloading, thus pushing the MEMLO up and up, and suddenly.. Kee-rash! Here's what you need to do to an OUT OF WARRANTY PR: Connection to alleviate this problem.

CHECKLIST MODIFICATION

_____ 1. Lay the PR: Connection face down on a soft surface.

_____ 2. Remove the 4 Phillips head screws from the bottom of the unit and set these aside. Also, turn the unit over, and remove the top cover, placing it in a safe place.

_____ 3. Note the Revision number marked on the upper right hand side of the PC board. If it is Rev. 4 or higher you are in luck, as this modification was thought of and the board was laid out to accommodate it easily! If it IS REV 4 or higher, please perform step 4. If it is LOWER than REV 4, please perform step 5. There is NO need to do both as they do the same thing, but on a different version of the PR:.

_____ 4. Hold the PR: Connection with the 3 ports facing you. Look directly behind the port connector marked R2. You will observe two little "silver dots", these are called "solder pads". They will be marked "R1 off". That's just what they do, they turn off the R1 port! Solder a 4" #22 wire to each of these solder pads.

_____ 5. Remove the pc board from its housing and turn it over. In the center of the board you will notice an IC that looks like

it is square (Its cool but square...heh heh). Notice one side of the chip has a dot plainly visible on it. This is pin 1. Count around the outside of the chip, moving toward the right, and locate pin 36. Solder a 6" piece of #22 wire here, and then place the board back into its case. Solder a 4" piece of #22 wire to ground.

_____ 6. Obtain a small toggle switch, and mount it in a convienient location on the case of the PR: Connection.

_____ 7. Solder the two wires to the switch.

_____ 8. Replace the cover on the unit, and away you go!

Here are some additional hardware notes:

While at the PACE computer show, I beheld something interesting on an MIO on display there. Instead of the solid panel on the MIO that I become accustomed to seeing, there were two screen-like panels to allow free airflow. When I inquired of Tom about the availability of these panels, he said that MIO owners could obtain these by getting intouch with ICD. He only asks that you have a mental picture of the layout of the side of the MIO where the on-off switch is. Tom informed me that there were two different configurations, and thus 2 different possibilities of panels to obtain.

And lastly, if you are the owner of an Atari 1050, and you have upgraded it with the "Doubler" from ICD, you know how wonderful the high speed and true double density can be! If for some reason the IC installed in U10 should ever go bad, you can obtain a replacement by sending the original, along with $7 to the good folk at ICD, and they will send you a replacement.

Well, if you don't own products from these fine folk, I trust I have shown you that ICD provides virtually unmatched user support in the Atari 8 bit world! You can do no better than to purchase any of their fine products! ICD's address and phone are:

ICD 1220 Rock Street Rockford, ILL 61101-437 Voice: 815-968-2228 BBS: 815-968-2229

Monitor Madness

Permission is hereby given for the use of this article or parts of this article only if the author and Layton Atari Computer Enthusiates (LACE), Utah Club receive credit.

Multi-Resolution Monitors on the ST or Megas

by: Irwin Brooks

If your like me, then the thought of having both a color and a high resolution black and white monitor has crossed your mind more than once. In fact, to me that would be the best situation. The B/W monitor for the high resolution productivity software to use, and the color for the picture and color requiring programs. Now that would be a set-up! But wait, that would mean two monitor, two cable and twice the space requirement. In addition there is a small hassle every time you wanted to switch between them. Well maybe that isn't the way to go.

One monitor to give you both would be better. That idea is not just a dream but is a reality today. The purpose of this article is to explain how to go about obtaining a color monitor that will work for all ST resolutions. The requirements of the monitor is of the primary importance. These are listed below:

Requirements:

	Lo/Med_rez Color	Hi-rez B/W
Resolution	640x200	640x400
Scan Rate	60 Hz	70 Hz
Input	RGB analog	monochrome
	horizonal sync	horizonal sync
	vertical sync	vertical sync
	audio	audio
IBM compat.	CGA	PGA

The above requirements need some explaination. This list should be the minimum specifications of the monitor with only one exception, the audio section. The audio section need not be included in the monitor, if not, then anouther separate audio amplifier is required. Radio Shack has a small speaker amplifier that will work for this: cost about $16.00. Some additional features listed below are very highly recommended:

Addition Features:

Text mode switch; green, amber or B/W (may be personnal requirement)

Tilt and swivel base
Antiglare screen
Audio section
13 inch or larger screen
Multi-sync capability

Once you've picked the monitor then the connection to the Atari is the next thing. To do this requires the few components listed below:

13 pin monitor plug with hood
9 wire cable
Monitor end mate plug (likely DB-9 connector)
Switch, micro DPST

Wiring the cable is done as indicated below:

Atari 13 pin DIN	**Monitor Signals**
1 Audio Out	Audio (optional)
4 Monochrome Detect	DPST switch
6 Green	Green
7 Red	Red
9 Horizonal Sync	Horizonal Sync*
10 Blue	Blue
11 Monochrome	Monochrome (Composite*)
12 Vertical Sync	Vertical Sync*
13 Ground	Ground

DPST Switch wiring:

Atari pin 11____/| .___Monitor monochrome input

Atari pin 4 _____/ .__ gnd

*Note: The monitor may require a blend of the horizonal and vertical syncs as the sync input. Or even both syncs and monochrome to get composite input. To do this put a 100 ohm resistor in line with each signal that is needed in the blend, then connect the other resistor ends together thus providing the monitor required signal. An example is below:

```
Atari pin 9 (Horz sync)_/\/\/\_
                              \(sync)_
Atari pin 12 (Vert sync)_/\/\/\_/      \ (composite)
                                        / (to DPST)
Atari pin 11 (Mono)____/\/\/\_____/
```

If the above information sounds complicated then its probably not for you. However, if it is something you want to try and need some help then feel free to call me, Irwin Brooks at (801)731-1516 for help.

I have included a list of possible monitors that will work for this application. The application should be further investigated before any purchase is made.

Make Model Telephone #

Amdek 632 Monitor (800)722-6335 Amdek 732 Monitor (800)722-6335 Amdek Smart Scan 735 (800)722-6335 AST Research VGA Premium Display (714)863-1333 Casper TM-5157 Multimode (408)922-0188 Goldstar 1430 VGA (408)737-8575 Goldstar 1440 Super (408)737-8575 Hewlett-Packard Co. VGA (800)752-0900 IBM 8513 (PC/2) Imtec Multiscan (404)623-9145 Magnavox 9CM062 Magnavox 9CM082 Magnavox Multi-mode Maxar PC Maxiscan (408)733-

2866 Mitsubishi Diamond Multi-sync (213)217-5732 Mitsubishi XC-1429C (213)217-5732 Nanao USA 8068H-US (213)325-5202 NEC Multisync(s) Princeton Graphics Hi-Resolution (609)683-1660 Quimax Systems DM-3114 (408)773-8282 Quimax Systems DM-3112 (408)773-8282 Relisys Multiscan 5155 (408)945-5155 Relisys RE 9513 (408)945-5155 Sony CPD-1320 (201)930-1000 Sony CPD-1303 (201)930-1000 Sony CPD-1302 (201)930-1000 Tandy VGM-200 (817)390-3700 Tandy VGM-300 (817)390-3700 Tatung CM-1492 (213)979-7055 Tatung CM-1496 (213)979-7055 Tatung CM-1495 (213)979-7055 Tatung CM-1296 (213)979-7055

P.S. This project will generate a Atari monitor with little purpose left on the system. So you can either sell or use it as a spare (dust collector).

According to Electronic Buisness Magazine, the Top 10 software companies were:

Lotus Development Oracle Systems, Microsoft Apple Computer, Compaq Ashton-Tate, Seagate Tech Western Digital, Cray Research Inmac.

GEM TOS 1.4 GRAPHIC ENVIRONMENT MANAGER

by R.F. Mariano

It's dated 12/05/88 and carries the following "readme" with it.

In the AUTO folder of this disk are two programs, AHDI and CAUTO. If you have an Atari hard disk, you can boot directly from this disk: AHDI will install the hard disk driver and CAUTO will launch your AUTO folder programs from drive C.

If you do not have an Atari hard disk, place whatever hard disk driver you use in the auto folder in place of AHDI (make sure it runs before CAUTO) and you should be able to boot TOS from floppy and your AUTO folder programs and accessories from your hard disk.

*** This is likely to be the final version of TOS in RAM.***

You find a simple theorem most artists follow is; "when it's done, it's done". You may say that doesn't make any sense..it does, believe me. After having used the earlier version of 1.4 for four months and then have the opportunity to use this edition, one can immediately see and feel the difference. The first noticeable change is the thinning out of more of the "helpful auto boot programs".

I had the batteries removed from the internal clock in the Mega4 I use because the clock in my hard disk appeared to be more stable. The reason I mention this is because no sooner had I installed the newer edition of TOS and attempted a bootup, it became hung up on the "clock read program" in the auto folder. Immediately, I had visions of going back to the earlier 1.4 version, but to my great surprise and utmost pleasure, the internal clock read routine in TOS 1.4 (12/5/88) is great! The clock in the Mega4 is super stable and trouble free now.

The minute this new edition booted I knew I was in for a treat, it easily compared to stepping into a sleek new sports car and expecting the greatest ride...and getting it. It boots like you are running a triple turbo driven supercar, it's up in a flash and smooth as silk. Once up and running and using it with TurboST V.1.4, the

simplest description is..wow! This is nice...all the kludge programs are history, the system runs smoother and quicker and best of all...this TOS has a future.

I tried a few experiments concerning larger partitions and the ability to read them. This version shows a great deal of promise and hopefully, in the near future, a handler will be released by either.. Atari, Supra, Berkely or ICD that will do the job. Come on guys, (and gals), we need the ability to read larger and/or more partitions. The days of the "peanut whistle sized" hard drive are numbered.

Any Atari user who does not take advantage of the new TOS in ROM chips when they are made available is truly going to miss the boat. In my humble opinion, don't hesitate.. get a set or two the moment they are available.

As the great Vaudvillian once said, "you ain't seen nuttin' yet". That's the way it is shaping up at Atari. The good news coming from Sunnyvale is just what the doctor ordered. Surely, it is a sign of great things to come.....

VDOS Prodigy Press Release

2 January 89

From: Marathon Computer Press

To: All ATARI ST Retailers, Wholesalers, and Enthusiasts

Subject: Commercial Release of The VDOS Prodigy Software System

Effective 2 January 1989 Marathon Computer Press has released the VDOS Prodigy Operating System Manager for all models of ATARI ST microcomputers.

Prodigy is an extremely innovative Software Librarian, DOS Manager, and Operating System Executive for the GEM Based ST. It has been likened to IBM counterparts Norton Utilities(tm), Norton Commander(tm), and Power Menu(tm) all bundled into one nice integrated package and it's available NOW for the ATARI ST.

Main Features

Define 100 autoexecute programs (More Slots can be defined if you like)

Over 50 DOS Utilities with a graphical interface

UNIX(tm) utility similarity

Virtual to Disk or RAM capability (Only requires 42K RAM to run programs in Virtual to Disk mode)

520 ST, 1040 ST, and Mega ST compatibility

Nearly complete compatibility with all existing ST software

Who Needs Prodigy?

Any business users, programmers, writers, power users, hard disk owners, or any enthusiast that owns a lot of ST software will fall in love with Prodigy. This is the ultimate productivity tool and time saver for those that routinely use many programs each day. Imagine defining a slot in one of Prodigy's 7 autoexecute menu systems to contain your program name, its location on one of your floppy or hard disks, and all other pertinent information. Just a couple of easy steps and you'll never have to go farther than Prodigy's point and click interface to run your programs again. And if it's your 10 most used applications, just press a function key to execute it.

This operating environment has to be experienced to be believed. It is compatible with nearly all ST software including the Beckemeyer Micro-RTX(tm) multitasking kernel. It goes beyond the competition, and was the first Virtual to Disk Operating System Shell ever written for the ATARI ST. As a matter of fact the original VDOS is located in the DL libraries of this Billboard System. VDOS was a ShareWare quality, experiment that led to the Full Scale Development of its Prodigal Son, VDOS Prodigy. Feel free to take a look at the original ShareWare version of VDOS, if you haven't already done so. It's just a taste of what

is possible with the Powerful Commercial version of the program.

Documentation

No skimpy little stapled documentation packs with this product! We have produced a >170 page professionally prepared manual that is bound in a durable and attractive Vinyl 3 Ring "D" binder. Attractive inserts distinctively adorn the manual and the optional slipcover. The body of the manual contains information on the following:

Software Ethics

The Prodigy Concept of Operation

How to Get Started

The Program Slots

Using Hot Keys

The DOS Utilities (In alphabetical order and at least 1 page dedicated to each)

The VDOSLOW Autoloader Program

Software Considerations

Future Plans

A Complete Bibliography

A Glossary

Error Codes

ASCII Codes

A Two Machine License (VDOS Prodigy can be installed in up to 2 machines legally)

This is a program package that began development over 2 years ago, and has been beta tested by some of the biggest names in the micro software business. Prodigy is one program environment that any serious ST user won't want to be without.

Still Not Convinced?

How about the following for some of the available DOS Utilities that are either a part of the main program or are Disk Distributed.

Accessory, Audit, Calendar, CHDIR, CHDRIVE, CHMOD, CONFIGURE, COPY(GLOBAL, FILE), COPYDIR, DELETE (GLOBAL,FILE)

DISPLAY, DSKFREE, EXECUTE, EXIT, FDATIME,(RETAIN FILE CREATION DATE)

FIND(FILES), FORMAT, HEADS

$HOME, HELP, LC(LINE COUNT), LS -L(LIST UP TO 1,500 FILES PER DIRECTORY), MEMFREE, MKDIR, MERGE (FILES) PASSWORD, REBOOT(SELECTABLE OR IMMEDIATE), RENAME SEARCH(PATTERN), SIZE?

SYSMAP(SYSTEM, MAPPING UTILITY), TAILS, TEE,

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Hardware Requirements

520 ST with dual drives (Can be run with a one drive 520 ST, but not recommended)

1040 or memory enhanced 520 ST with a single drive

Mega ST with a single drive

Any ST with a Hard Disk Drive

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